

Gremlin Engineering Department Strengths

1. Design very cost effective, high performance electronic systems.
2. Identify and efficiently utilize the lowest cost per bit memory the semiconductor industry has to offer.
3. Design and implement custom and semicustom integrated circuits.
4. Perform high quality "game" graphics for minimum cost in the industry.
5. Evaluate and be able to determine optimum microprocessors for specialized applications. Keep up with recent developments so that the best processor can be applied to each design task.
6. Define and write software which makes the job of day to day software generation easier and more efficient for the "line" programmers.
7. React very quickly in engineering designs. Integrate technologies (such as speech generation) in time frames typically one half to one fifth as long as "conventional" electronic industries require.
8. Look beyond the immediate tasks. Design hardware and software which solves a multitude of problems, rather than one solution for one problem.
9. Create as well as design.
10. Evaluate technology which is already "in place". This includes companies, divisions, and suppliers.

OEM Business: What It Is and Why We Should Be In It

OEM (Original Equipment Manufacturer) customers are those who buy product which already contains some "value added" design by another manufacturer. This subassembly type of component is then designed into the end product as one component among many others. For example, Electrohome is an OEM supplier to Gremlin since we incorporate their product into a larger produce of our own design. Another example is the proliferation of "board level" microcomputer systems which save the end manufacturer the trouble of designing a microcomputer from the ground up. The PC boards which contain the microprocessor system are the OEM buyers' basic building block, not the components themselves which make up the microcomputer.

The disadvantage of being an OEM supplier is that your margin must be smaller than that allowed by the "end" manufacturer, since you margin is only part of his. If your price is too high then it will be to the end manufacturer's advantage to build your part himself. In other words, the OEM supplier must provide sufficient motive to the end manufacturer that the build versus buy decision will be to buy.

There are numerous advantages:

1. A stable product. Since the OEM product is by definition a general purpose "component", it should serve a variety of users without modification. Also, its lifetime should be measured in years, not months as in our business.

2. A stable marketplace. To cite a poignant example, individual games and game companies will come and go, but as long as there is a game industry, Electrohome will sell color monitors.
3. A layer of insulation between the OEM supplier and the end user. This would spare us the awful agony of defining the end product, which could be a hit or miss prospect. If our customer A decides to use our OEM products to build luminous sun dials and fails, then we always have customers B-J to sell product to. On top of that, customer A has already bought and paid for our product, and he might indeed define a more sensible product next time around. In other words, with sensible marketing, our customer base could be stable and relatively resilient to a small percentage of failures.
4. After sale support is simpler and easier. It becomes the end user's responsibility to service the end product. Because of the stability of the OEM product (item 1), we can do a good job of warranty repair. Indeed, a good OEM supplier will give his customer excellent tools to fix the products themselves.

A successful OEM manufacturer is a special breed of cat. He must be very efficient in design, since his reason for being is to save the end manufacturer money. He must be fast on his feet to spot market needs and fill them. He must be extremely efficient in manufacturing, since he does not enjoy conventional end product margins. This is very much a volume intensive business where cost effectiveness is of paramount importance.

Do these capabilities sound familiar?

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